

AMENDMENT OF THE CLAIMS

Claims 1-18 (Canceled).

Claim 19. (original) A process for the production of hydrogen peroxide by the anthraquinone cyclic process, comprising a catalytic hydrogenation, an oxidation of the hydrogenated working solution with oxygen or an oxygen-containing gas, wherein hydrogen peroxide and substituted anthraquinone or mixture containing its ring-hydrogenated tetrahydro-anthraquinone is obtained and the hydrogen peroxide is extracted from the mixture obtained after the oxidation, in that the hydrogenation is performed by a continuous catalytic hydrogenation process wherein a substituted anthraquinone or a mixture of substituted anthraquinone and/or ring-hydrogenated tetrahydro derivatives thereof is recirculated in a reactor together with hydrogenation product, hydrogen and hydrogenation catalyst suspended in the reaction mixture, removing part of the hydrogenation product from the reactor, mixing the compound to be hydrogenated and the hydrogen together before entering the reactor and then feeding the substance to be hydrogenated and hydrogen into the reactor.

Claim 20. (original) A process for the production of hydrogen peroxide by the anthraquinone cyclic process comprising:

continuously catalytically hydrogenating a reaction mixture containing

an anthraquinone compound selected from the group consisting of substituted anthraquinone, mixtures of substituted anthraquinones, ring-hydrogenated tetrahydro derivatives thereof and mixtures,

(b) hydrogenation product,

(c) hydrogen and

(d) hydrogenation catalyst suspended in the reaction mixture,

continuously circulating said reaction mixture in a reactor,

removing part of the hydrogenation product from the reactor,

mixing the anthraquinone compound and the hydrogen together before introduction into the reactor and then feeding the mixed anthraquinone compound and the hydrogen into the reactor,

oxidizing the hydrogenated solution with oxygen or an oxygen containing gas to thereby obtain hydrogen peroxide and substituted anthraquinone or mixture containing ring-hydrogenated tetrahydro anthraquinone,

extracting hydrogen peroxide from the reaction after oxidizing.

Claim 21. (original) A process for the production of hydrogen peroxide by the anthraquinone cyclic process comprising:

forming a premix of an anthraquinone compound to be hydrogenated with hydrogen prior to introduction of said premix into a hydrogenation reactor,

introducing said premix into said hydrogenation reactor,

mixing said premix with a reaction mixture containing an anthraquinone compound selected from the group consisting of substituted anthraquinone, mixtures of substituted anthraquinones, ring-hydrogenated tetrahydro derivatives thereof and mixtures,

hydrogenation product,

hydrogen and

hydrogenation catalyst suspended in the reaction mixture,

continuously circulating said reaction mixture in said reactor and catalytically hydrogenating said reaction mixture together with said premix to form hydrogenation product in a hydrogenation solution

removing part of the hydrogenation product from the reactor

oxidizing the hydrogenated solution with oxygen or an oxygen containing gas to thereby obtain hydrogen peroxide and substituted anthraquinone or mixture containing ring-hydrogenated tetrahydro anthraquinone,

extracting hydrogen peroxide from the reaction after oxidizing.